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ABSTRACT

The House Committee on Science, Space, and Technology recommends that the Scientific and Technical Education Act of 1992 be passed as amended. In order to improve scientific and technical education at associate-degree-granting colleges, the bill authorizes the Director of the National Science Foundation (NSF) to make grants to institutions for the following purposes: enhancing programs of study in scientific and advanced technology fields; establishing regional "centers of excellence" to serve as clearinghouses and models for other associate-degree-granting institutions; forming partnerships with bachelor-degree-granting institutions to assist the transition of students transferring from two-year colleges; and establishing partnerships between associate-degree-granting institutions and secondary schools to promote interest in the study of scientific and advanced technology fields. The text of amendments is followed by sections describing: (1) the purpose of the bill; (2) the need for the bill; (3) a summary of committee actions; (4) two committee views on undergraduate education and use of funds; (5) a section-by-section analysis of the bill; (6) oversight findings; (7) budget analysis and projection; (8) a cost estimate by the Congressional Budget Office; (9) the bills effect on inflation; (10) the Administration's position on the bill; (11) changes in existing law made by the bill; (12) oversight finding and recommendations; and (13) the committee's recommendation. (MDH)

102D CONGRESS
2d Session

HOUSE OF REPRESENTATIVES

REPT. 102-508
Part 1

SCIENTIFIC AND TECHNICAL EDUCATION ACT OF 1992

APRIL 30, 1992.—Ordered to be printed

Mr. BROWN, from the Committee on Science, Space, and Technology, submitted the following

REPORT

[To accompany H.R. 2936 which on July 17, 1991, was referred to the Committee on Science, Space, and Technology and the Committee on Education and Labor]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, Space, and Technology, to whom was referred the bill (H.R. 2936) to establish programs at the National Science Foundation for the advancement of technical education and training in advanced-technology occupations, and for other purposes, having considered the same, report favorably thereon with amendments and recommend that the bill as amended do pass.

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The amendments are as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "Scientific and Technical Education Act of 1992".

54-940

SEC. 2. FINDINGS.

The Congress finds that—

(1) the position of the United States in the world economy faces great challenges from highly trained foreign competition:

(2) the workforce of the United States must be better prepared for the technologically advanced, competitive, global economy;

(3) the improvement of our work force's productivity and our international economic position depend upon the strengthening of our educational efforts in science, mathematics, and technology, especially at the associate-degree level;

(4) shortages of scientifically and technically trained workers in a wide variety of fields will best be addressed by collaboration among the Nation's associate-degree granting colleges and private industry to produce skilled, advanced technicians; and

(5) the Foundation's traditional role in developing model curricula, disseminating instructional materials, enhancing faculty development, and stimulating partnerships between educational institutions and industry, makes an enlarged role for the Foundation in scientific and technical education and training particularly appropriate.

SEC. 3. SCIENTIFIC AND TECHNICAL EDUCATION.

(a) NATIONAL ADVANCED SCIENTIFIC AND TECHNICAL EDUCATION PROGRAM.—(1) The Director shall carry out a program to assist accredited associate-degree-granting colleges, and consortia thereof, to provide education in advanced-technology fields. The program shall place emphasis on the needs of nontraditional students. It shall be designed to strengthen and expand the scientific and technical education and training capabilities of associate-degree-granting colleges through such methods as—

(A) the development of model instructional programs in advanced-technology fields;

(B) the development of faculty and instructors, both full- and part-time, in advanced-technology fields;

(C) the establishment of innovative partnership arrangements among associate-degree-granting colleges, the private sector, and State and local governments (and, where appropriate, Federal laboratories) including programs providing private sector donations, faculty opportunities to have short-term assignments with industry, sharing of program costs, equipment loans, and the cooperative use of laboratories, plants, and other facilities, and provision for relevant state-of-the-art work experience opportunities for students enrolled in such programs;

(D) the purchase or lease of state-of-the-art instrumentation essential to programs designed to prepare and upgrade students in scientific and advanced-technology fields; and

(E) the development and dissemination of instructional materials in support of improving the advanced scientific and technical education and training capabilities of associate-degree-granting colleges, including programs for nonscience students.

(2) In carrying out this subsection, the Director shall—

(A) award grants on a competitive, merit basis to accredited associate-degree-granting colleges that will make contributions, in cash or in kind, toward the cost of programs funded by such grants; and

(B) establish and maintain a readily accessible inventory of programs which are funded under this subsection.

(b) NATIONAL CENTERS OF SCIENTIFIC AND TECHNICAL EDUCATION.—The Director shall establish centers of excellence, not to exceed 10 in number, among associate-degree-granting colleges. Centers shall meet one or both of the following criteria:

(1) Exceptional programs of advanced technical education.

(2) Excellence in undergraduate education in mathematics and science.

The centers shall serve as national and regional clearinghouses and models for the benefit of both colleges and secondary schools, and shall provide seminars and programs to disseminate model curricula and model teaching methods and instructional materials to other associate-degree-granting colleges in the geographic region served by the center. Centers designated under this subsection shall be geographically distributed and chosen by a competitive, merit-based application process from among colleges that will make contributions, in cash or in kind, toward the cost of programs funded by grants under this subsection.

(c) ARTICULATION PARTNERSHIPS.—

(1) PARTNERSHIP GRANTS.—(A) The Director shall make grants to eligible partnerships to assist students pursuing bachelors degrees in mathematics, science,

engineering, or technology to make the transition from associate-degree-granting colleges to bachelor-degree-granting institutions, through such means as—

(i) examinating curricula to ensure that academic credit earned at the associate-degree-granting college can be transferred to bachelor-degree-granting institutions;

(ii) informing teachers from the associate-degree-granting college on the specific requirements of courses at the bachelor-degree-granting institutions; and

(iii) providing summer programs for students from the associate-degree-granting college to encourage such students' subsequent matriculation at bachelor-degree-granting institutions.

(B) Grants made under this paragraph shall be awarded on a competitive, merit basis.

(C) Each eligible partnership receiving a grant under this paragraph shall make contributions, in cash or in kind, toward the cost of programs funded by such grant. The contributions shall include—

(i) counseling students, including nontraditional students, about the requirements and course offerings of the bachelor-degree-granting-institution; and

(ii) conducting workshops at the associate-degree-granting-college, and conducting special tours and orientation sessions at the bachelor-degree-granting-institution to ensure that students are familiar with programs, including laboratories and financial aid programs, at the bachelor-degree-granting-institution.

(2) OUTREACH GRANTS.—The Director shall make grants to associate-degree-granting colleges to strengthen relationships with secondary schools in the community served by the college by improving mathematics and science education and encouraging the interest and aptitude of secondary school students for careers in science and advanced-technology fields. These grants shall be made through a competitive application process from among colleges that will make contributions, in cash or in kind, toward the cost of programs funded by grants made under this paragraph.

(3) GEOGRAPHIC DISTRIBUTION.—In awarding grants under this subsection, the Director shall ensure an equitable geographic distribution of such grants.

(d) COORDINATION WITH OTHER FEDERAL DEPARTMENTS.—In carrying out this section, the Director shall consult, cooperate, and coordinate, to enhance program effectiveness and to avoid duplication, with the programs and policies of other relevant Federal agencies.

(e) LIMITATION ON FUNDING.—To quality for a grant under this section, an associate-degree-granting college, or consortium thereof, shall provide assurances adequate to the Director that it will not decrease its level of spending of funds from non-Federal sources on advanced scientific and technical education and training programs.

(f) DEFINITIONS.—As used in this section—

(1) the term "bachelor-degree-granting institutions" means accredited colleges, universities, and institutes of technology that award bachelor degrees in mathematics, science, or engineering, or a 4-year technology degree;

(2) the term "advanced-technolcgy" includes advanced technical activities such as the modernization, miniaturization, integration, and computerization of electronic, hydraulic, pneumatic, laser, nuclear, chemical, telecommunication, fiber optic, robotic, and other technological applications to enhance productivity improvements in manufacturing, communication, transportation, commercial, and similar economic and national security activities;

(3) the term "associate-degree-granting college" means a regionally-accredited postsecondary educational institution that has authority to award an associate degree or comparable technical certificate and has the mission of offering comprehensive education services to meet the needs of a prescribed community, including a 2-year junior college, community college, technical institute, or other postsecondary institution offering comprehensive associate-degree programs in technical fields;

(4) the term "eligible partnership" means one or more associate-degree-granting colleges in partnership with one or more bachelor-degree-granting institutions; and

(5) the term "nontraditional students" means students who have been in the workforce and who desire to further their education and training in advanced-technology fields.

SEC. 4. ADMINISTRATIVE AMENDMENT.

Section 3 of the National Science Foundation Act of 1950 (42 U.S.C. 1863) is amended by adding at the end the following new subsection:

"(g) In carrying out subsection (a)(4), the Foundation is authorized to foster and support the development and use of computer networks which may be used substantially for purposes in addition to research and education in the sciences and engineering, if the additional uses will tend to increase the overall capabilities of the networks to support such research and education activities.".

SEC. 5. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated, from sums otherwise authorized to be appropriated, to the Director for carrying out this Act—

(1) $35,000,000 for fiscal year 1992; and

(2) $35,000,000 for fiscal year 1993.

Amend the title so as to read:

"A bill to establish programs at the National Science Foundation to strengthen and improve the scientific and technical education capabilities of associate-degree-granting colleges, and for other purposes.".

I. Purpose of the Bill

The purpose of the bill is to improve scientific and technical education at associate-degree-granting colleges by authorizing the Director of the National Science Foundation to make grants for the following purposes to institutions that award associate-degrees or comparable technical certificates: enhancing programs of study in scientific and advanced technology fields; establishing regional "centers of excellence" to serve as clearinghouses and models for other associate-degree-granting institutions; forming partnerships with bachelor-degree-granting institutions to assist the transition of students transferring from two-year colleges; and establishing partnerships between associate-degree-granting institutions and secondary schools to promote interest in the study of scientific and advanced technology fields.

II. Background and Need for Legislation

Two-year colleges are a major contributor to higher education and have become the largest pipeline to postsecondary education in the United States. In 1990, 1350 two-year colleges enrolled approximately 5 million students, representing 43% of all undergraduate students and constituting 40% of all institutions of higher education. Approximately 30% of students enrolled in two-year colleges transfer to four-year colleges and universities.

From the standpoint of science and technology education, two-year colleges are particularly important as a potential source of future scientists and engineers. The significance of associate-degree-granting colleges has long been recognized by American business and industry, which spends about $1.3 billion annually on training provided by two-year colleges.

While two-year colleges play an important role in science and technology education, these institutions face unique problems in delivering quality education to their students in scientific and advanced technology fields. Faculty members face heavy teaching loads and are frequently unable to keep up to date with the latest developments in their field. Laboratory facilities and equipment are frequently outmoded and expensive to upgrade.

The National Science Foundation (NSF) has played a major role as a catalyst in upgrading undergraduate science and mathematics programs at four-year-colleges. Although the NSF has supported programs in scientific and advanced technology education at two-year colleges, the level of effort has been small relative to other undergraduate programs and to the contribution of two-year colleges to undergraduate education. While the fiscal year 1993 budget request for the NSF is $3.03 billion, NSF is currently spending only about $3.35 million on grants to two-year colleges, with more than one-half of the funding allocated to instrumentation and to laboratory improvements. The NSF has itself recognized the need for a stronger role in this area. A January, 1989, report by the NSF entitled "Science and Engineering Education in Two-Year Colleges" concluded, "Programs in science, mathematics, and engineering must be developed that are more attractive and engaging for two-year college students." The Committee believes that the current budget of the NSF is adequate to enable an expansion of NSF's role in assisting associate-degree-granting colleges, without interfering with funding for the NSF's existing undergraduate programs.

Two major legislative initiatives have been proposed in the 102nd Congress to enhance science and technology education programs at two-year colleges. Representative David Price (D-NC) introduced H.R. 2936, the Technical Training and Education Act of 1991 and Representative Peter Hoagland (D-NE) introduced H.R. 3606, the National Community College Technology Education Act. While the two bills differ somewhat in their approaches to the problem, the essence of both proposals is to rely on traditional NSF methods to upgrade science and mathematics education at two-year colleges. These traditional methods include competitive grants to accomplish the following objectives:

(a) develop model curricula and instructional programs;
(b) provide faculty enrichment;
(c) develop and disseminate model instructional materials;
(d) purchase or lease of state-of-the-art instrumentation; and
(e) stimulate partnerships between educational institutions and the private sector.

The Committee believes that the establishment of a grants program for two-year colleges which emphasizes these traditional NSF methods will strengthen and improve science and mathematics education at associate-degree-granting colleges. The new programs will in turn improve the skills of both students graduating from two-year colleges to work in advanced technology fields and students transfering from two-year colleges to pursue bachelor degrees in science and mathematics at four-year colleges.

III. Summary of Committee Actions

H.R. 2936 was introduced by Representative David Price on July 17, 1991. The bill was referred jointly to the Committees on Science, Space, and Technology and Education and Labor. Within the Committee on Science, Space, and Technology, referral was made to the Subcommittee on Science and to the Subcommittee on Technology and Competitiveness.

On September 17, 1991 the Subcommittee on Technology and Competitiveness held a legislative hearing on H.R. 2936 and H.R. 3507, the American Industrial Quality and Training Act of 1991 introduced by Representative Tim Valentine (D-NC). Witnesses included Mr. Price; Dr. Luther Williams, Assistant Director for Education and Human Resources, National Science Foundation; Ms. Martha Quesada, Team Member, General Maintenance, New United Motor Manufacturing, Fremont, California; Mr. Anthony Patrick Carnevale, Vice President and Chief Economist, American Society for Training and Development, Alexandria, Virginia; Mr. James E. Schwarz, Sr., President, OMNI-Circuits, Inc., Glenview, Illinois; and Dr. David R. Pierce, President, American Association of Community and Junior Colleges, Washington, D.C. The Subcommittee on Technology and Competitiveness developed an amendment in the nature of a substitute to H.R. 2936, which was ordered reported on October 31, 1991 by voice vote.

On November 19, 1991, the Subcommittee on Science held a legislative hearing on H.R. 2936 and H.R. 3606. Witnesses included Mr. Price; Mr. Hoagland; Dr. Luther Williams, Assistant Director for Education and Human Resources, National Science Foundation; Dr. William F. Snyder, President, Wytheville Community College, Wytheville, Virginia; Dr. Cary Israel, Director of Illinois Community College Board, Springfield, Illinois; Mr. P. Douglas Groseclose, Director of Staffing, Organization and Employee Development, Martin Marietta Electronics, Information and Missiles Group, Orlando, Florida; Mr. Jeff Ellison, Existing Base Manager, INTEL, Chandler, Arizona; and Dr. Paul C. Gianini, Jr., President, Valencia Community College, Orlando, Florida, and Chairman, Joint Commission on Federal Relations of the American Association of Community and Junior Colleges and of the Association of Community College Trustees.

Based on recommendations of the witnesses, an amendment in the nature of a substitute was developed by Chairman Boucher. The Subcommittee on Science met on March 18, 1992, adopted the amendment and ordered the bill reported by voice vote.

The Subcommittee on Science amendment retained the basic structure of H.R. 2936, while refining the proposal to achieve the following objectives:

1. Provide greater discretion to the National Science Foundation in carrying out the programs authorized by H.R. 2936;
2. Refocus the legislation to emphasize traditional National Science Foundation methods to upgrade scientific and advanced technology education programs at associate-degree-granting colleges;
3. Eliminate the requirement in H.R. 2936 for matching nonfederal funds to be provided by associate-degree-granting colleges as a condition of receiving a grant. The amendment requires that grantees must make contributions, in cash or in kind, toward the cost of programs funded by the bill; and
4. Redirect the bill's authorization level by providing that there are authorized to be appropriated, from sums otherwise authorized to be appropriated, $35 million for fiscal year 1992 and $35 million for fiscal year 1993. The Subcommittee intends that the authorization level contained in the amendment will

not interfere with the National Science Foundation's existing undergraduate programs in mathematics and science.

The consensus reflected in the amendment adopted by the Subcommittee on Science builds upon initiatives undertaken on a small scale by the NSF. The NSF is provided with greater discretion in administering the various grants programs, which are focused on reliance upon traditional NSF methods of improving scientific and technical education rather than assistance through support of training programs at two-year colleges.

The bill also includes a provision to correct a problem identified at the Science Subcommittee's March 12, 1992 hearing on the management of the NSFNet. The problem involves the NSFNet acceptable use policy which imposes controls on the nature of traffic traveling on the NSFNet backbone. The testimony at the hearing supported dropping the acceptable use policy since it unnecessarily restricts traffic volume and has reduced the availability of commercial services to NSFNet users. NSF stated at the hearing that they must impose the acceptable use policy in order to conform to the provisions of the NSF enabling statute. The provision modifies the National Science Foundation Act of 1950 to allow NSF to remove the acceptable use policy, if the removal would result in an increase of the overall capability of the network to support research and education activities.

On April 2, 1992, the full Committee met to mark up H.R. 2936. The bill as reported by the Subcommittee on Science was ordered reported by unanimous voice vote.

IV. Committee Views

1. UNDERGRADUATE EDUCATION

The Committee views the programs authorized in this bill as necessary components of a balanced approach to undergraduate education. The Committee expects that funding for the programs in this bill will not be at the expense of other undergraduate efforts.

2. USE OF FUNDS

The Committee intends that NSF administer the programs authorized in this bill in the same manner and under the same rules as all its other education programs. For example, indirect cost reimbursement and faculty salary support should be handled in the same manner as in existing NSF education programs. Funding should not be used to support remedial education or to subsidize student tuition.

V. Section-by-Section Analysis

Section 1. Cites the short title as the "Scientific and Technical Education Act of 1992"

Section 2. Cites the following findings and reasons for introducing the legislation:

(1) The position of the United States in the world economy faces great challenges from highly trained foreign competition;

(2) The workforce of the United States must better prepare for the technologically advanced, competitive, global economy;

(3) The improvement of our workforce's productivity and our international economic position depend upon the strengthening of our educational efforts in science, mathematics, and technology, especially at the associate-degree level;

(4) Shortages of scientifically and technically trained workers in a wide variety of fields will best be addressed by collaboration among the Nation's associate-degree granting colleges and private industry to produce skilled, advanced technicians; and

(5) The National Science Foundation's traditional role in developing model curricula, disseminating instructional materials, enhancing faculty development, and stimulating partnerships between educational institutions and industry, makes an enlarged role for the Foundation in scientific and technical and training particularly appropriate.

Section 3(a). Establishes the "National Advanced Scientific and Technical Education Program". The Director of the National Science Foundation shall carry out a program to assist accredited associate-degree-granting colleges, and consortia thereof, to provide education in advanced-technology fields through such methods as:

A. The development of model instructional programs in advanced-technology fields;

B. The development of faculty and instructors, both full- and part-time, in advanced-technology fields;

C. The establishment of innovative partnership arrangements among associate-degree-granting colleges, the private sector, and state and local government (and, where appropriate, federal laboratories) including programs providing private sector donations, faculty opportunities to have short-term assignments with industry, sharing of program costs, equipment loans, and the cooperative use of laboratories, plants, and other facilities, and provision for relevant state-of-the art work experience opportunities for students enrolled in such programs;

D. The purchase or lease or state-of-the-art instrumentation essential to programs designed to prepare and upgrade students in scientific and advanced-technology fields; and

E. The development and dissemination of instructional materials in support of improving the advanced scientific and technical education and training capabilities of associate-degree-granting colleges, including programs for nonscience students.

In carrying out this subsection, the Director shall award grants on a competitive, merit basis to colleges that will make contributions, in cash or in kind, toward the cost of programs funded by such grants, and establish and maintain a readily accessible inventory of programs which are funded under this subsection.

Section 3(b). Authorizes the Director to establish centers of excellence, not to exceed 10 in number, among associate-degree-granting colleges.

The centers shall serve as national and regional clearinghouses and models for the benefit of both colleges and secondary schools, and shall provide seminars and programs to disseminate model curricula and model teaching methods and instructional materials to other associate-degree-granting colleges in the geographic region served by the center. Centers designated under this subsection shall be geographically distributed and chosen by a competitive,

merit-based application process from among colleges that will make contributions, in cash or in kind, toward the cost of programs funded by grants made under this subsection.

Section 3(c)(1). Authorizes the Director to make "partnership grants" to eligible partnerships to assist students pursuing bachelors degrees in mathematics, science, engineering, or technology to make the transition from associate-degree-granting colleges to bachelor-degree-granting institutions, through such means as:

(i) examining curricula to ensure that academic credit earned at the associate-degree-granting college can be transferred to bachelor-degree-granting institutions;

(ii) informing teachers from the associate-degree-granting college on the specific requirements of courses at the bachelor-degree-granting institution; and

(iii) providing summer programs for students from the associate-degree-granting college to encourage such students' subsequent matriculation at bachelor-degree-granting institutions.

Section 3(c)(2). Authorizes the Director to make "outreach grants to associate-degree-granting colleges to strengthen relationships with secondary schools in the community served by the college by improving mathematics and science education and encouraging the interest and aptitude of secondary school students for careers in science and advanced-technology fields. These grants shall be made through a competitive application process from among colleges that will make contributions, in cash or in kind, toward the cost of programs funded by grants made under this paragraph.

Section 3(d). Enumerates that in carrying out this section, the Director shall consult, cooperate, and coordinate, to enhance program effectiveness and to avoid duplication, with the programs and policies of other relevant federal agencies.

Section 3(e). Enumerates that to qualify for a grant under this section, an associate-degree-granting college, or consortium thereof, shall provide assurances adequate to the Director that it will not decrease its level of spending of funds from non-federal sources on advanced scientific and technical education and training programs.

Section 3(f). "Definitions":

(1) The term "bachelor-degree-granting institutions" means accredited colleges, universities, and institutes of technology that award bachelor degrees in mathematics, science, or engineering, or a 4-year technology degree;

(2) The term "advanced-technology" includes advanced technical activities such as the modernization, miniaturization, integration, and computerization of electronic, hydraulic, pneumatic, laser, nuclear, chemical telecommunications, fiber optics, robotic, and other technological applications to enhance productivity improvements in manufacturing, communication, transportation, commercial, and similar economic and national security activities;

(3) The term "associate-degree-granting college" means a regionally-accredited postsecondary educational institution that has authority to award an associate-degree or comparable technical certificate and has the mission of offering comprehensive education services to meet the needs of a prescribed community, including a 2-year junior college, community college, techni-

cal institute, or other postsecondary institution offering comprehensive associate degree programs in technical field;

(4) The term "eligible partnership" means one or more associate-degree-granting colleges in partnership with one or more bachelor-degree-granting institutions; and

(5) The term "nontraditional students" means students who have been in the workforce and who desire to further their education and training in advanced-technology fields.

Section 4. An administrative amendment adding the following new subsection at the end of Section 3 of the National Science Foundation Act of 1950:

(g) In carrying out subsection (a)(4), the Foundation is authorized to foster and support the development and use of computer networks which may be used substantially for purposes in addition to research and education in the sciences and engineering, if the additional uses will tend to increase the overall capabilities of the networks to support such research and education activities.

Section 5. Authorizes to be appropriated, from sums otherwise authorized to be appropriated, to the Director for carrying out this Act—$35 million in fiscal year 1992 and $35 million in fiscal year 1993.

VI. Oversight Findings and Recommendations by the Committee on Government Operations

No statement of findings and recommendations on oversight activity pursuant to rule X, clause 2(b)(2), and rule XI, clause 2(l)(3), of the Rules of the House of Representatives, has been submitted by the Committee on Government Operations for inclusion in this report.

VII. Budget Analysis and Projection

The bill does not provide for either new authorization or new budget authority, and consequently the provisions of Section 308(a) of the Congressional Budget Act of 1974 are not applicable.

VIII. Cost Estimate—Congressional Budget Office

U.S. Congress,
Congressional Budget Office,
Washington, DC, April 9, 1992.

Hon. George E. Brown, Jr.,
Chairman, Committee on Science, Space and Technology,
House of Representatives. Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has reviewed H.R. 2936, the Scientific and Technical Education Act of 1992, as ordered reported by the House Committee on Science, Space and Technology on April 2, 1992.

H.R. 2936 would authorize the Director of the National Science Foundation (NSF) to make grants for the following purposes to colleges that grant associate degrees or comparable technical certificates:

Developing programs of study in advanced technology fields;

Establishing up to 10 "centers of excellence" at selected associate-degree-granting colleges, which would serve as national and regional clearinghouses for disseminating advanced-technology curricula;

Forming partnerships with bachelor-degree-granting institutions to assist the transition of students from associate-degree-granting colleges to bachelor-degree-granting institutions;

Establishing relationships between associate-degree-granting colleges and local secondary schools to promote interest in advance-technology fields.

H.R. 2936 would authorize the appropriation of $35 million for each of the fiscal years 1992 and 1993, from sums otherwise authorized to be appropriated, to carry out the provisions of the bill. The overall authorizations for NSF funding in 1992 and 1993 have already been enacted, and H.R. 2936 would not change these totals. Therefore, enactment of the bill would result in no additional spending. H.R. 2936 would not affect direct spending or receipts. Therefore, pay-as-you-go procedures would not apply to the bill.

No costs would be incurred by state or local governments as a result of enactment of this bill.

If you wish further details on the estimate, we will be pleased to provide them. The CBO staff contact is Mark Grabowicz, who can be reached at 226-2860.

Sincerely,

JAMES M. BLUM
(For Robert D. Reischauer, Director).

IX. EFFECT OF LEGISLATION ON INFLATION

In accordance with rule XI, clause 2(l)(4), of the Rules of the House of Representatives, this legislation is assessed to have no adverse inflationary effect on prices and costs in the operation of the national economy.

X. ADMINISTRATION POSITION

NATIONAL SCIENCE FOUNDATION,
Washington, DC, March 31, 1992.

Hon. GEORGE E. BROWN, Jr.,
Chairman, Committee on Science, Space, and Technology,
House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: As the Committee prepares to mark up H.R. 2936, Scientific and Technical Education Act of 1992, I would like to provide you with the views of the Foundation on this legislation.

Providing greater opportunities for scientific and technical education, at all levels, is a goal that has strong support at the National Science Foundation. The appropriate role for the Foundation is one of intellectual and substantive leadership. The Foundation is able to draw upon its position in the science, engineering, and mathematics education and research communities to provide leadership, developmental support, and intellectual resources to strengthen two-year college science, engineering, mathematics, and

technology and the preparation of students graduating from high school.

NSF agrees with the Committee's desire to support programs that will lead to a more technologically capable workforce. Immediate attention needs to be drawn to the issues which most dramatically affect the quality of instruction in science, engineering, mathematics, and technology. Two-year colleges are ideally positioned to serve as catalysts for educational improvement and to address the national concern for scientific and technical literacy. The two-year college specifically provides for accessible, comprehensive services, and for quality undergraduate education, making it an effective agent for change.

NSF currently supports programs that focus on five key areas: Curricular reform and program improvement; professional development and renewal opportunities for faculty; assistance for the increasingly diverse and often academically unprepared student population; strategies that would expand linkages with elementary and secondary education as well as four-year colleges and universities; and partnerships among two-year colleges, private sector business, and industry.

NSF fully supports the findings in H.R. 2936 which states "* * * the improvement of our workforce's productivity and our international economic position depend upon the substantial upgrading and coordination of our educational efforts in science, mathematics, and technology, especially at the associate-degree level." We at NSF affirm the important role that two-year colleges play in the education of the nation's undergraduates, especially since community, junior, and technical colleges often serve as institutions of choice to minority and other underrepresented student populations.

While NSF agrees with the intent of this legislation, and we note that there have been some improvements in the bill since its introduction, our Organic Act already provides us with the necessary authority to carry out the objectives and programs within H.R. 2936. As such this bill adds nothing new to NSF's authority in this area and therefore the Administration opposes this bill.

I also wish to comment on the administrative amendment the House Science Subcommittee added during its mark up of this bill. This provision would modestly enhance the Foundation's authority in supporting the development and use of computer networks. We believe the provision would benefit the development of our networking activities and for that reason we are supportive of this particular provision and recommend it be included in legislation more acceptable to the Administration.

I hope find these views useful as the Committee prepares to mark up the legislation.

Sincerely,

Walter E. Massey, Director.

XI. Changes in Existing Law Made by the Bill, as Reported

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omit-

ted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

SECTION 3 OF THE NATIONAL SCIENCE FOUNDATION ACT OF 1950

FUNCTIONS OF THE FOUNDATION

SEC. 3. (a) * * *

* * * * * * *

(g) In carrying out subsection (a)(4), the Foundation is authorized to foster and support the development and use of computer networks which may be used substantially for purposes in addition to research and education in the sciences and engineering, if the additional uses will tend to increase the overall capabilities of the networks to support such research and education activities.

XII. OVERSIGHT FINDING AND RECOMMENDATIONS

Pursuant to rule XI, clause 2(l)(3) of the Rules of the House of Representatives, under the authority of rule X, clause 2(b)(2) and clause 3(f), the Committee's oversight findings and conclusions are reflected in the recommendations found in the present bill and report.

XIII. COMMITTEE RECOMMENDATION

A quorum being present, the bill was ordered reported on April 2, 1992, by voice vote of the Committee.

○